NATIONAL WEATHER SERVICE
FISCAL YEAR 2003
COST MANAGEMENT SYSTEM
IMPLEMENTATION GUIDE

9/30/02
Final Edition

TABLE OF CONTENTS

A. INTRODUCTION

The NWS Office of the Chief Financial Office (CFO) is leading an NWS-wide effort to implement a *cost management system* for all offices in Headquarters and Regional Financial Management Centers (FMCs) at the beginning of Fiscal Year 2003. The cost management system is intended to capture the cost of resources (labor and non-labor) by NWS organizations and programs, to assist managers in managing resources to support the NWS mission.

In order to obtain the necessary information, NWS staff will need to record non-labor base funded costs to a variety of base project codes, and NWS managers will need to complete labor surveys estimating, on a percentage basis, how NWS staff time is spent in different areas. This implementation guide is intended to provide information and explanations on the components of the cost management system and provide guidance to NWS staff on the coding of procurement, obligating, or credit card transaction documents and completing labor surveys.

B. NWS VISION AND STRATEGIC PLAN

The NWS vision is to be:

1) America's no surprise weather service

2) A world class team of professionals who:
   - Produce and deliver quality forecasts you can trust when you need them most
   - Use cutting edge techniques
   - Provide services in a cost effective manner
   - Strive to eliminate weather related fatalities and improve the economic value of weather information.

The cost management system is intended to support this vision by helping managers assure that services are performed in a cost effective manner.

In addition, the cost management system will support many of the NWS strategic objectives and performance measures found in the "NWS Strategic Plan for Water, Weather, and Climate Services 2000-2005" including:

Objective 4.2: Place decision and budget authority at the lowest levels; implement a financial information system which supports the delegation of budget authority...to the lowest appropriate level.

Objective 5.1: Implement an integrated policy, planning, budgeting, assessment, and accountability system that links decision-making and goals to program implementation and evaluation.

C. BACKGROUND

In FY 2000, a cost management pilot project was conducted in the Central Region. This pilot demonstrated the NWS' ability to collect cost data for significant activities with minimal impact on NWS programs and staff. In addition, the pilot showed that cost management data can provide useful information to NWS managers. The entire Central Region then implemented the new cost management system at the start of the FY 2001. During FY 01, other regions were partially phased in to the cost management system (primarily just the labor portion), and additional refinements were made. At the beginning of FY 02, all regions fully implemented the cost management system (labor and non-labor) by using an expanded base task code structure for recording base funded non-labor costs and by completing quarterly labor surveys. Also during FY 02 the groundwork was laid for incorporating Headquarters (HQ) and National Center for Environmental Prediction (NCEP) operations into the cost management system, with the goal of having a NWS-wide cost management system fully operational at the beginning of FY 03. To accomplish this goal, the cost management system and definitions were expanded to include work performed by HQ and NCEP. As the NWS gains experience, further modifications are possible and the cost management staff will provide updated guidance as needed.

D. WHAT IS COST MANAGEMENT

Cost management is the identification of the resources (costs) used to run an organization or program, assigning the costs to products and services (outputs), and using that information to manage operations. Rather than focusing on tracking costs by budget or funding source, cost management focuses on what and where resources are spent. By connecting costs to outputs a cost management system provides managers with performance data (e.g., cost per output). This performance data can assist managers and staff in analyzing operations and determine where improvements are needed.

For budget execution reporting, costs are usually reported by object class or by funding source. Typical reporting of costs at a Weather Forecast Office (WFO) would appear as follows:

BUDGET EXECUTION *(by Object Class)*	
Salaries	$1.6M
Travel	.2
Supplies & Srvc.	.2
Equipment	.2
Other Obj. Classes	.1
TOTAL	$2.3M

BUDGET EXECUTION *(by Funding Source)*	
Base	$1.5M
Systems (NEXRAD/ASOS)	.3
Facilities	.2
Reimbursable	.1
PAC	.1
Earmarks	.1
TOTAL	$2.3M

These reporting methods are required by Federal regulations and provide some cost management information, but do not allow managers to answer questions such as how much labor costs were devoted to ASOS or how much was spent on public zone forecasts.

In a cost management system, the same $2.3 million costs would be reported by program or output as shown in the following example:

COST MANAGEMENT

Services	$.8M
Systems	.5
Technology Infusion	.1
Outreach	.2
Management/Administration	.3
Facilities	.2
Earmarks	.1
Reimbursable	.1
TOTAL	$2.3M

This type of information is more meaningful to managers because it shows how resources are spent by processes rather than just object class or budget source.

E. NWS COST MANAGEMENT STRUCTURE

The NWS cost management structure is divided into two main parts, the nine high-level cost categories (e.g., Services), and the cost objects (e.g., Public Forecast Product) within each category. Within Services and Systems the cost objects are further grouped by like cost objects. The table below shows the overall structure. The non-bolded entries are the cost objects.

	COST CATEGORIES & COST OBJECTS
1.0	**SERVICES**
1.1	***Weather and Climate Forecast Products***
1.11	IFPS Forecast Product Generation
1.12	***Non-IFPS Forecast Product Generation***
1.121	Public Forecast Products
1.122	Aviation Forecast Products
1.123	Fire Weather Forecast Products
1.124	Hydrologic Forecast Products
1.125	Marine Weather Products
1.126	Climate Products
1.2	***Severe/Hazardous Weather Related Products***
1.21	Severe/Hazardous Weather Products
1.22	Hurricane/Tropical Weather Products
1.23	Tsunami Warnings
1.24	Volcanic Ash Forecast Products
2.0	**SYSTEMS**
2.1	***Data Acquistion/Observing Systems***
2.11	***NEXRAD***
2.111	NEXRAD Development
2.112	NEXRAD Deployment

	COST CATEGORIES & COST OBJECTS
2.113	NEXRAD Operations and Maintenance
2.114	NEXRAD IT Security Technical Controls
2.12	***ASOS***
2.121	ASOS Development
2.122	ASOS Deployment
2.123	ASOS Operations and Maintenance
2.124	ASOS IT Security Technical Controls
2.13	Upper Air/Radiosonde
2.14	Satellite Systems
2.15	Cooperative Observer System
2.16	Hydrologic Systems
2.17	Marine Weather Systems
2.18	Other Data Acquisition and Obeserving Systems
2.2	***Data Integration, Analysis and Modeling Systems***
2.21	***AWIPS***
2.211	AWIPS Development
2.212	AWIPS Deployment
2.213	AWIPS Operations and Maintenance
2.214	AWIPS IT Security Technical Controls
2.22	Weather and Climate Primary Supercomputer Operations & Maintenance
2.23	Weather and Climate Back Up Supercomputer Operations & Maintenance
2.3	***Disseminations Systems***
2.31	NOAA Weather Radio/Console Replacement System (NWR/CRS)
2.32	NOAA Weather Wire System/Emergency Mangers Weather Info (NWWS/EMWIN)
2.33	Other Dissemination Systems
2.4	Telecommunications Systems
2.5	Other InformationTechnology (IT) Systems
2.6	IT Security Technical Controls (other than for NEXRAD, ASOS, AWIPS)
3.0	**TECHNOLOGY INFUSION**
3.1	Meteorological Tech Infusion
3.2	Climate Tech Infusion
3.3	Ocean Tech Infusion
3.4	Hydrological Tech Infusion
3.5	Other Tech Infusion
4.0	**OUTREACH:**
4.1	Cooperative Observer Program
4.2	Services & Education Outreach Programs
5.0	**MANAGEMENT/ADMINISTRATION:**
5.1	Manage Human Resources
5.2	Diversity/EEO
5.3	Manage Fiscal Resources
5.4	International Activities
5.5	General Professional Development
5.6	Other Management Activities
5.7	Perform General/Admin. Work
5.8	IT Security--Program Management
5.9	A-76 Studies
6.0	**FACILITIES**

	COST CATEGORIES & COST OBJECTS
6.1	Maintain Facilities
6.2	Environmental Compliance
6.3	Safety and Health Compliance
6.4	Facility Construction
7.0	**CONGRESSIONAL EARMARKS & SPECIAL PROJECTS:**
8.0	**REIMBURSABLES/LINE OFFICE TRANSFERS**
9.0	**MISCELLANEOUS**
9.1	Miscellaneous Costs

Please note, the cost objects for 7.0 and 8.0 have not been listed due to the large number of earmarks and reimbursables. Also, a final list will not be ready until after the FY 03 budget is approved by Congress. A complete listing will be provided when available.

F. NWS COST MANAGEMENT CODING GUIDANCE

The Cost Management System utilizes two methods for identifying costs by cost object: project codes (task codes prior to FY03) for identifying non-labor costs and labor surveys for identifying labor costs.

The sections below provide general guidance for these two methodologies. More detailed descriptions regarding cost objects and project codes can be found in the attached Appendix 1 – Cost Object Definitions and Appendix 2 – Cost Management Quick Reference Coding Guide. Also, Appendix 3 has a list of frequently asked questions (FAQs).

F.1 NON-LABOR CODING GUIDANCE

For base funding, sometimes referred to as local base funds or local budget, a unique project code was created for each cost object for the purpose of identifying **non-labor base funded** costs by cost object. NCEP also has a similar but smaller list of project codes.

Note, this list of project codes for base funded costs do not change the project codes for non-base funds. Examples of non-BASE funds are:

- Systems funding, such as NEXRAD Operations and Maintenance (48M2LNX)
- WFO Maintenance (48M1JFM or 48M1JMF)
- Earmarks, such as funding received for specific NWR transmitter sites
- Reimbursable funding, such FAA ASOS Production and Maintenance (4BM1JAM)
- CWIP/PAC funding, such as Central Computer Facility - CWIP (42MSL40)
- Funding received from other NOAA Line Offices
- Management Fund (48M1JGE or 48M1HGE).

Below are some general guidance and principles to consider when coding non-labor base funded costs:

1) Use the Cost Object Definitions (Appendix 1) as a guide when trying to determine which project code to use when coding procurement or obligating documents, or credit card transactions. The goal is to tie all significant non-labor costs to the most closely related cost object(s) (please see the exception listed in #4 below). For example, supplies purchased specifically for a Service Hydrologist would be charged to the 48M1J20 project code.

2) Not all project codes apply to every office. For example, not all field offices within a region are upper air sites, therefore a non-upper air site will probably not need to use the project code for Upper Air (48M1JUA).

3) **Offices may still use task codes (formerly known as phase codes under FIMA) with project codes.**

4) Charge costs that cannot be easily traced or connected to a cost object to project code 48M1J10 (the "Miscellaneous" cost object). However, if a significant non-labor base funded cost (greater than $1,000) clearly supports just two or three cost objects, then the costs should be split among the appropriate cost objects where feasible. There may not always be a clear choice regarding which base project code to use. You will need to use your professional judgment and be consistent.

This guidance does not affect the current practice of splitting costs between object classes or between base and non-base project codes. For example, some field offices split their monthly utility invoices between the base and NEXRAD Systems Operations and Maintenance project codes. This will not change.

F.2 LABOR SURVEY GUIDANCE

Organizations that Need to Submit a Survey
Generally, each organization or office that has its own financial organization code and labor costs need to submit a labor survey as listed below:

1) All Regional Headquarters Division Chiefs (Systems Operations Division [SOD] Chief would submit labor survey for all staff under him or her including the Systems Integration and the Observation & Facilities Branches)

2) Regional Director's office

3) All WFOs and River Forecast Centers (RFCs)

4) All Center Weather Services Units (CWSUs)

5) Other region field offices as determined (includes unique field offices at some regions)

6) For NWS Headquarters and NCEP FMCs, a labor survey will be completed for each office organization code as determined by FMC and CFO Office staff. Typically, this would be done at the organizational branch level.

The one exception to the above are the Port Meteorologist Offices (PMOs), which will not complete a labor survey. Their time will be included either with the SOD or the WFO survey, depending on which organization is funding the PMO.

Schedule for Submission
The manager for the organization/office will need to complete the survey on a quarterly basis per the following schedule:

1st Quarter (October - December) - complete survey in January
2nd Quarter (January - March) - complete survey in April
3rd Quarter (April - June) - complete survey in July
4th Quarter (July - September) - complete survey in October.

How to Access the Survey
The survey is web-based and is accessible via the following link: http://rims.nws.noaa.gov/ . Access the organization's labor survey by:

1) Selecting "Cost Management Labor Survey,"

2) Enter organization through the drop down menu,

3) Enter the user ID and password (provided by the CFO financial systems staff).

Each quarter, CFO Office staff will let the FMC budget officers and Administrative Management Division Chiefs know when the web page labor survey is available for managers to begin completing the quarterly labor surveys. The FMC budget officers will then coordinate and provide the necessary information to the managers in their regions for completing labor surveys. If problems occur with accessing the survey or you do not have a user ID or password, then contact the cost management staff listed in Section H.

How to Complete the Survey
For each organization, only one labor survey is required. The organization's manager needs to assign the total productive work time of **NWS staff** on a percentage basis to the relevant cost objects, utilizing the two digit cost object numbers (e.g. 1.11 - IFPS Forecast Product Generation) shown in Section E - Cost Management Structure and in Appendix 1 and 2. The manager completing the labor survey should consider all NWS staff that are paid through his or her office/organization code including any sector facility technicians (SFTs) and regional maintenance specialists (RMSs). The percentage of time devoted toward each cost object is based on the whole staff, and the total percentage assigned must equal 100% (the web-based labor survey has a built-in check for this). Further instructions, navigational tips and

clarifications are found on the labor survey web site. There is also a web link called "instructions.htm" that provides further information.

Refer to the Cost Object Definitions (Appendix 1) as a guide to determine which cost objects should be used, however, the cost management staff is letting each organization manager determine how they develop the percentages for their labor survey responses.

For WFOs, it has been found that some Meteorologists in Charge (MICs) have worked with their management team to determine the estimated percentages for the organization. Other MICs have involved their entire staff or worked fairly independently to determine the labor survey percentages. Since labor costs make up the bulk of costs in most organizations/offices, it is important to carefully and as accurately as possible determine the labor percentages for your organization.

G. COST MANAGEMENT DATA REPORTING

For labor, all labor costs (regardless of project codes) in the FIMA/CAMS accounting system within an organization code are first separated from non-labor costs by object class. The actual FIMA/CAMS labor costs for each organization code are then multiplied by the estimated labor percentages obtained through the labor surveys to determine estimated labor costs for each organization code by cost object.

For non-labor costs, all non-labor costs in the project codes for each cost object are added together to determine the non-labor costs for a particular cost object. For example, to determine the total non-labor costs of Upper Air/Radiosonde, the non-labor costs in the 48M1JUA base funded project code would be added together with any non-BASE Upper Air/Radiosonde related costs recorded in other project codes.

The resulting labor and non-labor amounts will be combined by the CFO Office in various quarterly cost management reports and posted to a website. For each organization code that submits a labor survey there will be cost management report showing costs (labor and non-labor) by cost categories and by cost object. For each **FMC, there will be FMC-wide and summary reports** as well. The CFO Office will communicate regularly to the FMC budget officers when the quarterly reports are available and provide other information (website, passwords, etc.).

H. CFO OFFICE COST MANAGEMENT PROGRAM CONTACTS

Please contact one of the following NWS Headquarters CFO Office staff if you have any comments or questions regarding the cost management system.

Jeff Carr	Jeff.Carr@noaa.gov	(301) 713-9050 x153
Christina Darling	Christina.Darling@noaa.gov	(301) 713-9050 x146
Tyndall Traversa	Tyndall.Traversa@noaa.gov	(301) 713-9050 x154

Appendix 1 - Cost Object Definitions

This appendix provides a brief definition of each cost object identified within the National Weather Service (NWS) cost management program. A "cost object" is a grouping of activities for which specific data is to be reported. All cost objects are titled in bold and underlined. Related cost objects are grouped within cost categories. Cost categories are in bold, but are not underlined. Examples of activities included within each cost object are in italics. The base project code, for use in the charging non-labor costs, are also provided. Note: NCEP project codes are not listed here. Please see Appendix 2 for the list of NCEP project codes.

1.0 Services

The Services cost category includes the development and preparation of:

1) Weather and climate forecast products (1.1 - routine forecasts and climate observations)

2) Severe/hazardous weather products (1.2 - statements, watches, advisories and warnings, including those related to hurricane/tropical weather, volcanic ash and tsunami).

Services also include all forecast and warnings-related work, such as monitoring weather conditions, manipulating and maintaining data and databases, verification, reporting, internal/external coordination, dissemination, training, policy development, planning, managing and similar service-related activities.

Work related to data acquisition or observing is not considered a component of Services and should be reported under the relevant cost object within the Systems cost category (2.0).

Report work related to Weather and Climate Forecast Products (1.1) separately from work related to Severe/Hazardous Weather Products (1.2). In addition, report work involving the use of the Interactive Forecast Preparation System (IFPS) separately under IFPS Forecast Product Generation (1.11) from other Weather and Climate Forecast Products work (1.12).

1.1 Weather and Climate Forecast Products – The development and preparation of forecasts and meteorological data products.

1.11 IFPS Forecast Product Generation – The simultaneous development and preparation of multiple types of forecasts and meteorological data products using the Interactive Forecast Preparation System (IFPS) from a common digital database (e.g., ZFP, RDF, CCF). This includes scheduled and event-driven forecast products, program-wide products and weather data service products (e.g., *state weather summaries*). **Base Project Code 48M1JCR**.

1.12 Non-IFPS Forecast Product Generation – The development and preparation of various types of forecasts and meteorological data using methods other than IFPS.

1.121 Public Forecast Products – The development and preparation of public forecast and meteorological data products and services. This includes scheduled and event-driven public forecast products, weather data service products and *area forecast discussions (AFD*), as well as the general provision of weather data to the public. **Base Project Code 48M1JRP**.

1.122 Aviation Forecast Products – The development and preparation of aviation forecasts, such as *TAF, TWEB, METARS, Area Forecasts (AF) and Winds Aloft Forecasts*. **Base Project Code 48M1JWF**.

1.123 Fire Weather Products – The development and preparation of fire weather products, such as *Fire Weather (Zone) Forecasts, Fire Danger Statements, Smoke Management Forecasts, Spot Forecasts and Fire Weather Trend Forecasts*. **Base Project Code 48M1J50**.

1.124 Hydrologic Forecast Products – The development and preparation of hydrologic forecast products, such as *River Stage Information/Statement, Hydrologic Summaries, Daily River and Lake Summaries, Precipitation and Temperature and Hydrologic Outlooks, and including Advanced Hydrologic Prediction Services*. **Base Project Code 48M1J20**.

1.125 Marine Weather Products – The development and preparation of marine weather products, such as *Bay and Coastal, Offshore, High Seas, Recreational, Great Lakes Open Lake and Near Shore and Surf Forecasts and Area Discussions*. **Base Project Code 48M1J30**.

1.126 Climate Products – The development and preparation of climate products, such as *6-10 Day, Week 2, 30-Day, 90-Day Outlooks, Hazards Assessment and ENSO Discussion, as well as the preparation of Daily and Monthly Climate Summaries*. **Base Project Code 48M1JRC**.

1.2 Severe/Hazardous Weather Products – The development and preparation of severe/hazardous weather products.

1.21 Severe/Hazardous Weather Products – The development and preparation of severe/hazardous weather products, other than

hurricane/tropical weather, tsunami and volcanic ash. This includes *discussions, advisories, statements, watches and warnings related to public, aviation, marine or fire weather and hydrologic operations, as well as HAZMAT weather support.* **Base Project Code 48M1JSZ**.

1.22 **Hurricane/Tropical Weather Products** – The development and preparation of all hurricane and tropical weather products, such as: *Tropical Weather Outlook, Hurricane/Tropical Cyclone/Storm warnings, watches, advisories, discussions and strike possibilities; Cyclone Updates; and, Disturbance Statements.* **Base Project Code 48M1JHT**.

1.23 **Tsunami Warnings** – The development and preparation of all *Tsunami Warning Products.* **Base Project Code 48M1J60**.

1.24 **Volcanic Ash Forecast Products** – The development and preparation of *Volcanic Ash Forecast Products.* **Base Project Code 48M1JVA**.

2.0 Systems

The Systems cost category includes all activities related to weather information technology systems, including data acquisition/observing systems; data integration, analysis and modeling systems; and, dissemination systems. This category also includes telecommunications systems and other information technology systems, except those associated with support functions, such as Finance and Personnel. Systems-related activities include:

- Program management (e.g., planning; policy, procedure and budget development; and, quality assurance)
- Administration (e.g., configuration management)
- Developing, purchasing, shipping, installing, testing and certifying new hardware and/or software
- Technical support (e.g., support to the field)
- Developing, conducting, attending, administering and coordinating systems-related training
- Data acquisition/observing
- Special projects
- Similar systems-related activities.

Also included in this cost category are IT security technical controls (i.e. development, implementation, operation, monitoring and maintenance of firewalls, intrusion detection systems, security-related hardware and software, virus detection software, back-up, alternate and hot sites and off-site storage). All IT security technical controls activities related to most NWS systems are reported under a single, combined system security technical controls cost object (2.6). However, IT security technical controls activities are reported separately for each of the major

NWS systems (i.e. NEXRAD, ASOS and AWIPS) (2.114, 2.124 and 2.214). Work related to Information Technology (IT) security, other than technical controls, should not be reported within the Systems cost category. Instead it should be reported under IT Security–Program Management (5.8).

Information technology systems that support management and administrative functions (e.g., the Commerce Administrative Management System and the Consolidated Logistics System) should not be reported under this cost category; but, instead, should be reported under the cost object related to that system's function (e.g., "Manage Fiscal Resources" (5.3)).

2.1 Data Acquisition/Observing Systems – Work relating to information technology systems that generate observations and acquire data to support weather forecasts and warnings.

2.11 NEXRAD – All activities (excluding IT security program management) related to the NEXRAD system.

2.111 NEXRAD Development – All activities related to the development of the NEXRAD system, when the functionality being developed represents a significant improvement to existing capabilities. Examples include: *system architecture design; prototyping hardware or software; and, developing, testing and "debugging" software modules or builds*. **Base Project Code 48M1JND**.

2.112 NEXRAD Deployment – All activities related to the incorporation (i.e. deployment; implementation) of new hardware or software into the existing, operational NEXRAD system, when the functionality being incorporated represents a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying new hardware or software; ORPG; and, training on the new hardware or software*. **Base Project Code 48M1JNP**.

2.113 NEXRAD Operations and Maintenance – All activities related to the normal, continuing operations and maintenance of the NEXRAD system, such as replacing or maintaining hardware or software, when such hardware or software does not represent a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying replacement hardware or software; modifying existing software to correct technical problems (including marginal improvements in functionality); monitoring system performance; hardware and*

software preventive and corrective maintenance, operational system communication services; and, technical support. **Base Project Code 48M1JNX**.

2.114 **NEXRAD IT Security Technical Controls** – All activities related to the development, implementation, operation, monitoring and maintenance of system security technical controls (e.g., firewalls, intrusion detection systems) Examples include: *security training; purchasing, shipping, installing, testing and certifying hardware and software intended primarily to effect or improve system security technical controls; and, providing off-site storage*. **Base Project Code 48M1JNA**.

2.12 **ASOS** – All activities (excluding IT security program management) related to the ASOS system.

2.121 **ASOS Development** – All activities related to the development of the ASOS system, when the functionality being developed represents a significant improvement to existing capabilities. Examples include: *system architecture design; prototyping hardware or software; and, developing, testing and "debugging" software modules or builds*. **Base Project Code 48M1JDE**.

2.122 **ASOS Deployment** – All activities related to the incorporation (i.e. deployment; implementation) of new hardware or software into the existing, operational ASOS system, when the functionality being incorporated represents a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying new hardware or software; and, training on the new hardware or software.* **Base Project Code 48M1JDP**.

2.123 **ASOS Operations and Maintenance** – All activities related to the normal, continuing operations and maintenance of the ASOS system, such as replacing or maintaining hardware or software, when such hardware or software does not represent a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying replacement hardware or software; modifying existing software to correct technical problems (including marginal improvements in functionality); monitoring system performance; hardware and software preventive and corrective maintenance, operational*

system communication services; and, technical support. **Base Project Code 48M1JAS**.

2.124 **ASOS IT Security Technical Controls** – All activities related to the development, implementation, operation, monitoring and maintenance of system security technical controls (e.g., firewalls, intrusion detection systems). Examples include: *security training; purchasing, shipping, installing, testing and certifying hardware and software intended primarily to effect or improve system security technical controls; and, providing off-site storage*. **Base Project Code 48M1JAY**.

2.13 **Upper Air/Radiosonde** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of the upper air/radiosonde programs. Examples include: *taking upper air observations; purchasing equipment; and, related training*. **Base Project Code 48M1JUA**.

2.14 **Satellite Systems** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of satellite systems. Examples include: *interagency coordination; system monitoring; and, quality assurance.* **Base Project Code 48M1JSR**.

2.15 **Cooperative Observer System** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of the Cooperative Observer System. Examples include: *purchasing and shipping equipment; taking local NWS Coop Station observations; and, collecting and processing Coop Observer real-time reports*. **Base Project Code 48M1JCP**.

2.16 **Hydrologic Systems** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of hydrologic systems, such as IFLOWS and HADS. Examples include: *collecting and processing remote hydro data-DCP, LARC Alerts and precipitation observations; developing, testing and "debugging" software modules or builds; and, purchasing, shipping, installing, testing and certifying hardware (e.g., river gauges) and software.* **Base Project Code 48M1JHY**.

2.17 **Marine Weather Systems** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of marine weather systems, such as *CMAN and Dial-a-buoy*. Examples include: *operations and maintenance of F420 marine wind systems; and,*

purchasing, shipping, installing and testing marine system-related equipment. **Base Project Code 48M1JMW**.

2.18 **Other Data Acquisition and Observing Systems** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of data acquisition and observing systems that are not separately identified. Examples include: *taking local SFC Obs-SCD, SDO and climate observations; conducting/managing UCP tasks; Aviation Observing Program Management, including SAWRS; and, observational quality assurance.* **Base Project Code 48M1JDA**.

2.2 **Data Integration, Analysis and Modeling Systems**: Work relating to information technology systems that integrate, analyze and model weather data.

2.21 **AWIPS**: All activities (excluding IT security program management) related to the AWIPS system.

2.211 **AWIPS Development** – All activities related to the development of the AWIPS system, when the functionality being developed represents a significant improvement to existing capabilities. Examples include: *system architecture design; prototyping hardware or software; and, developing, testing and "debugging" software modules or builds*. **Base Project Code 48M1JAD**.

2.212 **AWIPS Deployment** – All activities related to the incorporation (i.e. deployment; implementation) of new hardware or software into the existing, operational AWIPS system, when the functionality being incorporated represents a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying new hardware or software; and, training on the new hardware or software*. **Base Project Code 48M1JAP**

2.213 **AWIPS Operations and Maintenance** – All activities related to the normal, continuing operations and maintenance of the AWIPS system, such as replacing or maintaining hardware or software, when such hardware or software does not represent a significant improvement to existing capabilities. Examples include: *purchasing, shipping, installing, testing and certifying replacement hardware or software; modifying existing software to correct technical problems (including marginal improvements in functionality); monitoring system performance; hardware and*

software preventive and corrective maintenance, operational system communication services; and, technical support. **Base Project Code 48M1JAW**.

2.214 **AWIPS IT Security Technical Controls** – All activities related to the development, implementation, operation, monitoring and maintenance of system security technical controls (e.g., firewalls, intrusion detection systems). Examples include: *security training; purchasing, shipping, installing, testing and certifying hardware and software intended primarily to effect or improve system security technical controls; and, providing off-site storage*. **Base Project Code 48M1JSA**.

2.22 **Weather and Climate Primary Supercomputer Operations and Maintenance** – All activities (excluding IT security) related to the operation and maintenance of the weather and climate primary supercomputer. Examples include: *preventive and corrective maintenance; system monitoring; and, system training.* **Base Project Code 48M1JWM**.

2.23 **Weather and Climate Back-up Supercomputer Operations and Maintenance** – All activities (excluding IT security) related to the operation and maintenance of the weather and climate back-up supercomputer. Examples include: *preventive and corrective maintenance; system monitoring; and, system training*. **Base Project Code 48M1JWB**.

2.3 **Dissemination Systems** – Work relating to information technology systems that support the dissemination of weather forecasts, warnings and other information.

2.31 **NOAA Weather Radio/Console Replacement System (NWR/CRS)** – All activities (excluding outreach and IT security) related to the development, deployment, operations and maintenance of NWR/CRS. Examples include: *purchasing, shipping, installing and testing equipment; system monitoring; and system training.* **Base Project Code 48M1JWR**.

2.32 **NOAA Weather Wire System/Emergency Managers Weather Information (NWWS/EMWIN)** – All activities (excluding outreach and IT security) related to the development, deployment, operations and

maintenance of NWWS/EMWIN. Examples include: *operations; preventive and corrective maintenance; and, system training*. **Base Project Code 48M1JWE**.

2.33 **Other Dissemination Systems** – All activities (excluding outreach and IT security) related the development, deployment, operations and maintenance of other dissemination systems, such as the Family of Services (FOS) and the Interactive Weather Information Network (IWIN). Examples include: *purchasing, shipping, installing and testing equipment; system monitoring; and system management and administration.* **Base Project Code 48M1JDS**.

2.4 **Telecommunications Systems –** All activities (excluding IT security) related to the development, deployment, operations and maintenance of telecommunications systems, such as phone lines and other telecommunication services that are not for the exclusive use by one particular system. Examples include: *FTS 2002/3; local and long distance telephone service; the telecommunications gateway; and, commercial internet services.* **Base Project Code 48M1JTE**.

2.5 **Other Information Technology (IT) Systems** – All activities (excluding IT security) related to the development, deployment, operations and maintenance of IT systems (hardware and software) that are not otherwise separately identified, such as *office PC systems; office Local Area Networks (LANs); EMRS; and, global positioning systems*. Examples of Other IT Systems activities include: *purchasing and installing hardware and software; preventive and corrective maintenance; and system-related training.* **Base Project Code 48M1JTT**.

Note: IT systems solely supporting management and administrative functions, such as Finance and Personnel, should not be reported under this cost object; these systems should be reported under the related cost object within the "Management and Administration" cost category (5.0).

2.6 **IT Security Technical Controls (other than for NEXRAD, ASOS and AWIPS)** – All activities related to IT security (excluding IT security program management) for all NWS systems, except NEXRAD, ASOS and AWIPS. Examples include: *installing, testing and monitoring firewalls; operating and maintaining virus detection software; and, security technical controls-related training.* **Base Project Code 48M1JTC**.

3.0 Technology Infusion

The "Technology Infusion" cost category includes all research and similar activities, such as *IFPS development*, *data assimilation, model development, guidance/product development and quality assessment and forecaster applications (e.g., SOOs, TDGs)*, intended to support forecasting improvements**.**

3.1 **Meteorological Technology Infusion** – Research and similar activities related to improving short-term (i.e. up to two weeks) weather forecasting. **Base Project Code 48M1JGT**.

3.2 **Climate Technology Infusion** – Research and similar activities related to improving long-term (i.e. beyond two weeks) weather forecasting. **Base Project Code 48M1JCT**.

3.3 **Ocean Technology Infusion** – Research and similar activities related to improving oceanographic forecasting. **Base Project Code 48M1JHA**.

3.4 **Hydrological Technology Infusion** – Research and similar activities related to improving forecasting of river and lake conditions, including the development of Advanced Hydrologic Prediction Services (AHPS). **Base Project Code 48M1JYT**.

3.5 **Other Technology Infusion** – Research and similar activities related to improving aspects of weather forecasting not otherwise separately identified. **Base Project Code 48M1JRT**.

4.0 Outreach

The Outreach cost category includes all activities and products designed for external audiences, which convey an awareness of the value and usefulness of NOAA/NWS science, products, programs and services in promoting personal safety, an improved economy and more effective environmental stewardship.

4.1 **Cooperative Observer Program Outreach** – All outreach activities related to the Cooperative Observer Program. Such activities include: *recruitment; site visits to present awards and recognition to cooperative observers; completing outreach related paperwork; monitoring program quality; planing, implementing and monitoring program outreach initiatives; preparing and coordinating Cooperative Observer network newsletters; and program-related travel, training, policies and directives.* **Base Project Code 48M1JPP**.

4.2 **Service and Education Outreach Programs** – All outreach activities related to services and systems other than the Cooperative Observer Program. Examples include: *outreach activities in support of Severe/Hazardous Weather, Marine Weather, Hurricanes, Climate Services, Tsunami and Volcanic Ash Services, NWR expansion and Storm Ready; PMO activities; Alaska Weather TV; visits with the media, emergency managers, transportation officials and schools; open houses; public/community education meetings and partner workshops; preparing and coordinating pamphlets, newsletters, brochures, videos, posters, CD-ROMS, and other materials; and, outreach-related travel and training*. **Base Project Code 48M1JRH.**

5.0 Management and Administration

The Management and Administration cost category includes all activities related to the overall management and direction of the NWS' resources to achieve the NWS mission. Management and administrative activities related to NWS program-specific services and systems are not included in this cost category. **Costs that are funded through the Management Fund (48M1JGE or 48M1HGE) are exempt from using the Base project codes.**

5.1 **Manage Human Resources** – All activities related to the effective, efficient and legal management of the NWS' human resources. Examples include: *supervision; recruitment; resolving employee disputes; coordinating labor-management relations; scheduling shift work; developing staffing plans; and related training (e.g., team training).* **Base Project Code 48M1JHR**.

5.2 **Diversity/EEO** – All activities related to the NWS' responsibilities to support equal employment opportunity and diversity. Examples include: *recruitment and retention activities focused on women, minorities and people with disabilities; providing guidance, advice and policy statements on equal opportunity and diversity; diversity/EEO training; and, conducting and coordinating equal opportunity investigations.* **Base Project Code 48M1JEE**.

5.3 **Manage Fiscal Resources** – All activities related to the general or overall management of the NWS's financial resources. Examples include: *budget formulation and execution; financial systems (e.g., the Commerce Administrative Management System and the Consolidated Logistics System) development and operations; financial reporting; financial management training; and, resolving audit issues.* **Base Project Code 48M1JFR**.

5.4 **International Activities** – All activities related to the international interests of the U.S. meteorologic and hydrologic communities, except where such activities

are related specifically to other cost objects. Examples include: *coordinating and attending international meetings and conferences regarding meteorology (e.g, World Meteorological Organization conferences); assisting other countries in crisis with meteorological and hydrologic support; and, managing bilateral technology transfer and data exchange.* **Base Project Code 48M1JTA.**

5.5 **General Professional Development** – All activities related to staff development, except when such activities are related specifically to other cost objects. Examples include: *taking leadership and management training; reading professional journals; and, attending regional workshops/conferences (e.g., MIC/HIC) that are general in nature and cover material on many different NWS services, systems or other functions*. **Base Project Code 48M1JPD**.

5.6 **Other Management Activities** – All activities related to the management of the NWS, except when such activities are related specifically to other cost objects. Examples include: *overall strategic planning; preparing and monitoring operating plans; participating in other NWS initiatives/special projects; reporting performance measures; conducting organizational studies; internal/employee communications, ensuring "Homeland Security" (except as included in other cost objects); and, responding to Congressional inquiries.* **Base Project Code 48M1JNR**.

5.7 **General and Administrative Functions** – All administrative activities that are not specifically related to other cost objects. Examples include: *procuring and managing supplies; performing general office support; managing mail and shipping activities; arranging travel; and handling administrative e-mail*. **Base Project Code 48M1JGA**.

5.8 **IT Security–Program Management** – All activities related to IT security, other than technical controls. Examples include: *developing IT security plans, reviewing security program compliance; conducting IT risk assessments; responding to IT security incidents; and, participating in "security awareness" training.* **Base Project Code 48M1JSP**.

5.9 **A-76 Studies** - All activities related to planning, conducting, and analyzing A-76 studies, including contracted services acquired to support and conduct an A-76 studies. Also includes work related to acquiring contract services to support and conduct an A-76 study. **Base Project Code 48M1J76**.

6.0 Facilities

The Facilities cost category includes all activities related to NWS facilities.

6.1 **Maintain Facilities** – All activities related to the maintenance of any NWS facility, including the buildings and grounds that house NWS equipment, such as NEXRAD towers. Examples include: *developing and monitoring service contracts; repairing facilities and arranging for facilities repairs; coordinating SFT on-site oversight; snow removal; and, managing facilities maintenance*. **Base Project Codes 48M1JFM (primary code–this is the old 8M1JFS task code) and 48M1JMF (secondary code once 48M1JFM funding is depleted).**

6.2 **Environmental Compliance** – All activities necessary to comply with internal, local, state and federal environmental laws, rules and regulations. Examples include: *responding to environmental incidents; restoring and decontaminating sites; conducting environmental assessments; environmental compliance training; and, participating in waste and pollution prevention and recycling*. **Base Project Code 48M1JEC.**

6.3 **Safety and Health Compliance** – All activities necessary to comply with Engineering Handbook #15 (Safety and Health Compliance). Examples include: *analyzing site operations versus requirements; participating in training and testing related to safety and health (e.g., fire drills); and, maintaining safety and health equipment.* **Base Project Code 48M1JSY.**

6.4 **Facility Construction** – All activities related to the construction of NWS facilities. Examples include: *procuring and managing facilities design and build support; PDAM-related activities (FOC meeting preparation and coordination); and maintaining documentation*. **Base Project Code - None.**

7.0 Congressional Earmarks and Special Projects

The Congressional Earmarks and Special Projects cost category includes all activities that are separately identified in the NWS' appropriation. Such activities typically do not span across Financial Management Centers (FMCs). Therefore, the specific cost objects within this cost category for each FMC are listed separately. Moreover, the Congressional Earmarks and Special

Project's cost object numbers (e.g., 7.1, 7.5) on each FMC's labor survey may not include all numbers in sequence.

8.0 Reimbursables/Line Office Transfers

The Reimbursables/Line Office Transfer cost category includes all activities that the NWS performs for other agencies (e.g., the Federal Aviation Administration, Bureau of Land Management/US Forest Service, Office of Oceanic and Atmospheric Research). Such activities typically do not span across FMCs. Therefore, the specific cost objects within this cost category for each FMC are listed separately. Moreover, the Reimbursables/Line Office Transfers cost object numbers (e.g., 8.1, 8.5) on each FMC's labor survey may not include all numbers in sequence. Separate items are listed only for those Reimbursables/Line Office Transfers that are expected to exceed $100,000 in FY 2003 NWS-wide and for which the individual FMC has any costs.

9.0 Miscellaneous

9.1 Miscellaneous Costs - The "Miscellaneous" cost category includes only those costs that cannot otherwise be attributed to any other cost category/cost object, or costs attributable to multiple cost objects that can not easily be assigned to those cost objects. *Examples include: office lease and utilities, general office supplies, and permanent change in station (PCS) expenses.* **Base Project Code 48M1J10.**

Appendix 2 - Cost Management Quick Reference Guide

PROJECT CODE			COST CATEGORIES	LABOR
Base	Central Forecast Guidance	Non-Base*	AND COST OBJECTS	SURVEY
			SERVICES	**1.0**
			Weather and Climate Forecast Products	**1.1**
48M1JCR			IFPS Forecast Product Generation	1.11
			Non-IFPS Forecast Product Generation	1.12
48M1JRP	48M1H30		Public Forecast Products	1.121
48M1JWF	48M1H60		Aviation Forecast Products	1.122
48M1J50	48M1H75		Fire Weather Forecast Products	1.123
48M1J20	48M1H35		Hydrologic Forecast Products	1.124
48M1J30	48M1H40		Marine Weather Products	1.125
48M1JRC	48M1H50		Climate Products	1.126
			Severe/Hazardous Weather Related Products	1.2
48M1JSZ	48M1H79		Severe/Hazardous Weather Products	1.21
48M1JHT	48M1H80		Hurricane/Tropical Weather Products	1.22
48M1J60			Tsunami Warnings	1.23
48M1JVA			Volcanic Ash Forecast Products	1.24
			SYSTEMS	**2.0**
			Data Acquistion/Observing Systems	2.1
			NEXRAD	2.11
48M1JND			NEXRAD Development	2.111
48M1JNP			NEXRAD Deployment	2.112
48M1JNX			NEXRAD Operations and Maintenance	2.113
48M1JNA			NEXRAD IT Security Technical Controls	2.114
			ASOS	**2.12**
48M1JDE			ASOS Development	2.121
48M1JDP			ASOS Deployment	2.122
48M1JAS			ASOS Operations and Maintenance	2.123
48M1JAY			ASOS IT Security Technical Controls	2.124
48M1JUA			Upper Air/Radiosonde	2.13
48M1JSR			Satellite Systems	2.14
48M1JCP			Cooperative Observer System	2.15
48M1JHY			Hydrologic Systems	2.16

PROJECT CODE			COST CATEGORIES	LABOR
Base	Central Forecast Guidance	Non-Base*	AND COST OBJECTS	SURVEY
48M1JMW			Marine Weather Systems	2.17
48M1JDA			Other Data Acquisition and Observing Systems	2.18
			Data Integration, Analysis and Modeling Systems	**2.2**
			AWIPS	**2.21**
48M1JAD	48M1H11		AWIPS Development	2.211
48M1JAP			AWIPS Deployment	2.212
48M1JAW			AWIPS Operations and Maintenance	2.213
48M1JSA			AWIPS IT Security Technical Controls	2.214
48M1JWM	48M1H15		Weather and Climate Primary Supercomputer Operations & Maintenance	2.22
48M1JWB	48M1H16		Weather and Climate Back Up Supercomputer Operations & Maintenance	2.23
			Disseminations Systems	**2.3**
48M1JWR			NOAA Weather Radio/Console Replacement System (NWR/CRS)	2.31
48M1JWE			NOAA Weather Wire System/Emergency Managers Weather Info (NWWS/EMWIN)	2.32
48M1JDS			Other Dissemination Systems	2.33
48M1JTE	48M1H90		Telecommunications Systems	2.4
48M1JTT	48M1H14		Other Information Technology (IT) Systems	2.5
48M1JTC	48M1H13		IT Security Technical Controls (other than for NEXRAD, ASOS, AWIPS)	2.6
			TECHNOLOGY INFUSION	**3.0**
48M1JGT	48M1H20		Meteorological Tech Infusion	3.1
48M1JCT	48M1H21		Climate Tech Infusion	3.2
48M1JHA	48M1H22		Ocean Tech Infusion	3.3
48M1JYT	48M1H23		Hydrological Tech Infusion	3.4
48M1JRT	48M1H24		Other Tech Infusion	3.5
			OUTREACH:	**4.0**
48M1JPP			Cooperative Observer Program	4.1
48M1JRH	48M1HOR		Services & Education Outreach Programs	4.2
			MANAGEMENT/ADMINISTRATION:	**5.0**
48M1JHR	48M1HHR		Manage Human Resources	5.1
48M1JEE	48M1HEE		Diversity/EEO	5.2

PROJECT CODE			COST CATEGORIES	LABOR
Base	Central Forecast Guidance	Non-Base*	AND COST OBJECTS	SURVEY
48M1JFR	48M1HFR		Manage Fiscal Resources	5.3
48M1JTA	48M1HIA		International Activities	5.4
48M1JPD	48M1HPD		General Professional Development	5.5
48M1JNR	48M1HNR		Other Management Activities	5.6
48M1JGA	48M1HGA		Perform General/Admin. Work	5.7
48M1JSP			IT Security--Program Management	5.8
48M1J76			A-76 Studies	5.9
			FACILITIES	**6.0**
48M1JFM (primary-WFO Maint.) 48M1JMF (secondary)	48M1JFM		Maintain Facilities	6.1
48M1JEC	48M1HEC		Environmental Compliance	6.2
48M1JSY	48M1HSY		Safety and Health Compliance	6.3
			Facility Construction	6.4
		Various Codes	**CONGRESSIONAL EARMARKS & SPECIAL PROJECTS:**	**7.0**
		4RM1J__,4BM1J__	**REIMBURSABLES/LINE OFFICE TRANSFERS**	**8.0**
			MISCELLANEOUS	**9.0**
48M1J10	48M1H10		Miscellaneous Costs	9.1

* - Non-Base codes will be provided later this year.

Appendix 3 - Frequently Asked Questions (FAQ)

Q: Under what cost object do meetings with media contacts fall?

A: Meetings with media contacts falls under cost object 4.2 - Service and Education Outreach Programs.

Q: Under what cost object should staff meetings, management program reviews, etc. be classified?

A: Meeting time should be classified under the cost object on which the meeting is primarily focused. General staff meetings that cover many areas would be reported under 5.7 - General and Administrative Functions, while management program reviews would be charged to 5.6 - Other Management Activities.

Q: Where would I charge compilation of reports?

A: If the reports are standard monthly reports, report the time under 5.6 - Other Management Activities. If the report relates to a specific severe weather event (such as a verification report), report the time under 1.21 - Severe/ Hazardous Weather Products.

Q: Under what cost object should I classify time spent developing internet products?

A: It depends what the Internet products are for. If they are for disseminating information to the public, report the time as 2.33 - Other Dissemination Systems. If the products are for general office use, report the time as 2.5 - Other IT Systems.

Q: How do I report time spent on IT systems supporting management and administrative functions?

A: Only time spent on a specific management/administrative IT system would be reported under one of the Management and Administration cost objects. For example, if staff supported the deployment of CAMS (the new finance system) then report the time under 5.3 - Manage Fiscal Resources.

However, if your staff support many different systems, such as a help-desk operation, then report the time under 2.5 - Other IT Systems. The general rule is if you can not easily trace time to one of the listed systems, telecommunications, or IT security then report the time under 2.5.

Q: What process should I use to estimate the overall distribution of staff time for my department?

A: There are a couple of ways to go about estimating staff time distribution.

- Manager estimates %'s for division as a whole
- Each employee reports his/her own estimate; average of all employees reported for division

Q: Should employee salary be used as a weight when determining the overall estimation for my WFO/Office?

A: At this point, no.

Q: How often will I need to fill out a labor survey? How is the survey expected to be administered in its maturity?

A: Currently, labor surveys are prepared quarterly. We are exploring other data collection options but we have no immediate plans to change it at this time.

Q: How will the data produced by the Cost Management Program help us achieve the NWS mission?

A: The data will give us more insight into where NWS funds are being spent. This will allow us to manage costs more efficiently.

Q: Should contractors be included in the labor survey? Time spent working on contracts?

A: No, contractors are not included in the labor survey. The project code determines to which cost object contractor costs are charged.

Q: Does the current T&A reporting change?

A: No, the Cost Management System has no impact on T&A reporting.

Q: Should I include employee overtime, comp time, credit hours, leave, and benefits in my staff time estimates?

A: All productive hours, including overtime, comp time, and credit hours should be included as part of the 100% of staff time for purposes of the labor survey. Do not include leave and benefits.

Q: Under which cost object do I place training for systems (i.e. AWIPS, NEXRAD)?

A: Charge training directly attributable to a specific system to that system. For systems with multiple cost objects (e.g., AWIPS Development, AWIPS Deployment, etc.) charge the training to the most closely related cost object. For example, if the training is related to the deployment of a new system then record the time to [System] Deployment.

Q: Do I submit one survey for each section in my branch, or a survey for the branch as a whole?

A: If the sections have a separate organization code in the financial system then you would report for each section, but generally you would submit one survey for the branch as a whole.

Q: What should I do if a large amount of employee time is spent on a cost object that does not appear in the survey?

A: Contact the Cost Management staff to discuss the situation. The contact people are listed below.

Q: Where do I report science and technology infusion planning.

A: Report under the most closely related Technology Infusion cost object, 3.1 through 3.4, or under if 3.5 - Other Technology Infusion.

Q: How/when will I be able to access the results of the survey?

A: TBD, we are waiting for the resolution of technical problems.

Q: Who can I contact for further information regarding the survey?

- Jeff Carr (Jeff.Carr@noaa.gov; (301) 713-9050 x153)
  Tyndall Traversa (Tyndall.Traversa@noaa.gov; (301) 713-9050 x 136)
  Christina Darling (Christina.Darling@noaa.gov; (301) 717-9050 x 146)

Appendix 4 - Summary of Changes

Below is a list of changes made for the FY 03 cost category/cost object structure and definitions from the FY 02 version.

1) Reordered the cost categories making Services 1.0 and Systems 2.0.
2) Added new cost categories and cost objects for Technology Infusion and Facilities.
3) Moved the cost objects: Maintain Facilities, Environmental Compliance, and Safety and Health Compliance to the new Facilities cost category.
4) Added cost objects for development, deployment, operations and maintenance, and IT security to NEXRAD, ASOS, AWIPS.
5) Created a new Severe/Hazardous Weather cost object, moving the related activities from the routine weather forecast cost objects.
6) Added a cost object for IFPS (multiple) weather forecast products.
7) Reduced the number of Outreach cost objects and moved the data dissemination function from Outreach to the Services cost objects.
8) Eliminated the Data Acquisition/Collection cost object from Services and embedded the function in the related Systems cost objects.